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Adoption of Persuasive Technology as a Communication Media for Learning in Integrated School

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ABSTRACT

In the current era, persuasive technology is increasingly being used in the health and wellness field to help users improve their lifestyle and find information about their health problems. Along with the rapid development of science and technology in this digital era, the field of education is also experiencing the same thing. This research was conducted to examine the use of persuasive technology adoption in the education domain. Along with the rapid development of Information and Communication Technology (ICT) in this digital era, the field of education is also experiencing technological advances and developments that bring innovation to education. This can be seen from the many digital platforms used by schools to support learning such as Google Classroom, Noosphere, Zoom, Canva For Education, Smart Library, etc. This research uses a descriptive qualitative method with a post-positivist approach. Research data were obtained from interviews, observations, and studying supporting documents/data. Interviews were conducted with informants, namely teachers and curriculum developers. The theories used in this research are the Media Richness Theory (MRT) and the Technology Acceptance Model (TAM). This study concludes that the adoption of persuasive technology that has been implemented by Pahoa Integrated School has been running effectively. In practice, the persuasive technology applied by Pahoa Integrated School has been able to accommodate the communicator (teacher), and the medium (application) to communicants (students). This research can make a real contribution, especially in the field of education at large, so that persuasive technology can be effectively integrated into learning.

Keywords: *Persuasive Technology, Educational Communication, Mass Communication, Digital Media*

INTRODUCTION

Currently, persuasive technology is a sub-discipline of human-computer interaction that has generated increasing interest in the application of persuasive to a system. The concept of persuasive technology is a form of intentional inviting, attracting, and persuading that has been designed into a system whose purpose is to provide social influence without coercion or action. Fogg (2022) further defines persuasive technology as a computing system, device, or application that is deliberately designed to change a person's attitude or behavior in a predetermined manner. The use of the term "persuasive" actually implies the attitude and behavior of users that can be influenced by an application or technological system. Persuasive communication activities usually aim to influence people who receive messages, where the

message is voluntarily conveyed and becomes a message that can influence the recipient of the message (Mohammed Abdullah Bawazir et al., 2019)

The internet and technology have become part of everyday life where all activities and interactions affect the lives of its users (Ruijie Wang et al., 2022). Internet and technology users can use technology to find information to influence the individual's decision-making (Bakhshian & Lee, 2021). In its implementation, persuasive technology uses the use of computers or other devices that are designed in such a way as to influence a person's behavior in action (Wayan G. Santika et al., n.d.). Recently, mass media technology has begun to develop and has an important role in facilitating the delivery of persuasive messages such as buying an item, making a decision, making a donation, etc (Mohammed Abdullah Bawazir et al., 2019).

In the current era, persuasive technology is increasingly used in the health and wellness domain to motivate and assist users in improving their lifestyles and seeking information about their health problems (Noora Aldenaini et al., 2020).In line with its implementation, persuasive technology is also a field that incorporates technological principles in influencing and changing individual behavior or attitudes. In a business context, technology is also often used to improve customer satisfaction through various tools designed to persuade and influence customer decisions and experiences. Today, customer satisfaction is one of the important indicators in determining the success of business processes. It is customer satisfaction that allows companies to collect and analyze customer data to provide a more personalized experience (De Leon et al., 2020).

The process of involving various technologies in a business requires humans as individual actors as the main ones in using these technologies. In addition, there are also support groups involved in a company as part of the organization. Finally, there are companies or other types of businesses as part of a community or social movement (Hepp, 2020). In addition to the application of persuasive technology in the health sector, currently, persuasive technology is also widely applied in the field of education as a learning medium for students in the classroom. In its application, good learning media must meet several conditions, including being able to increase learning motivation for students. Learning media are various components that can stimulate the learning process to help the students remember what they have learned so that it has a positive impact on student learning development (Rahmatika et al., 2021).

The rapid development of science and technology in this digital era can affect everyday life, including in the field of education. Since COVID-19 hit Indonesia in 2020, education has been one of the aspects affected until the method of learning is switched to online. This happened because of the policy to stop the face-to-face teaching and learning process in the classroom to maximize the social distancing process. Since then, the adoption of persuasion technology has become massively used in the field of education both from school levels to lectures (Michael Christian et al., n.d.). Persuasive technology can be interpreted as something interactive from a system designed by a computer that is used to try to change human behavior. This persuasive technology consists of elements used to design, verify, and analyze the impact that occurs between interactive computers and their influence on changing attitudes or behavior (Brian J Fogg, 2022).

Currently, communication has an important role in human life, including in the education sector. The concept of educational communication is currently a new thing, especially in the world of education (Sueca, 2019). This new concept of educational communication is evidenced by research conducted (Surani, 2019)which explains that the development of technology in the current era has also contributed to the development of learning media to obtain information and support the course of learning. In addition, several functions support

educational communication, starting from social functions, expressive functions, ritual functions, and instrumental functions (Mansyur, n.d.)

Each part of these functions has its role as a means for the teaching and learning process to take place properly. When a teacher provides teaching material in class, it is necessary to prepare creative effective teaching aids to achieve the expected educational communication goals (Rustamov Ilkhom Tursunovich, 2022). Therefore, a teacher must be able to create teaching materials with the adoption of technology that is as interesting as possible so that in its application it not only distributes messages and knowledge but also data to make students interested and motivated to learn (Gunawan & Asnil Aidah Ritonga, 2019). Current technology-based learning media provides easy access to teachers and students to increase creativity and enthusiasm for learning by creating digitization-oriented teaching and learning activities. There are types of technology and learning media that can be obtained and accessed by teachers and students so that the learning media becomes more useful. Currently, education needs to build a blueprint (work plan) to design future learning. This learning will later be considered as life learning that has started from elementary school age until entering the university level. From this structured work plan, the human resources produced can later plunge and take a better role in the world of society (Fransiskus Adikara, 2020).

The adoption of persuasive technology in learning media is currently widely utilized in Google Classroom, Noosphere, Zoom, Canva For Education, Google Meet, and Smart Library. Pahoa Integrated School, as one of the private trilingual schools, is currently implementing the adoption of persuasive technology in the student learning process in the classroom. Teachers at Pahoa Integrated School have developed learning media based on the phenomenon of development in the current era, especially in the development of a digital literacy-oriented curriculum. Digital literacy is knowledge and skills to use digital media, communication tools, or networks in finding, evaluating, using, creating information, and utilizing it in a healthy, wise, intelligent, careful, appropriate, and law-abiding to foster communication and interaction in everyday life (Yenni Yamin, 2022).

Learning media includes teaching aids that will function properly when the media can provide a meaningful learning experience, and activate and delight students. The existence of ICT (Information and Communication Technologies) implemented in persuasive technology is one of the learning processes that can be used in all subjects at Pahoa Integrated School. According to (Wangge, 2020) the advantages of adopting persuasive technology in ICT-based learning media include 1) improves the quality of learning, 2) expanding access to education and learning, 3) helps visualize abstract ideas, 4) making it easier to understand the material being studied, 5) displaying learning material becomes more interesting, and 6) Allows interaction between learning and the material being studied

METHODS

This research uses the post-positivism paradigm. The research conducted uses a qualitative approach. This type of research is descriptive in nature where authors will examine and discuss how the process of implementing the adoption of persuasive technology as a learning communication medium at Pahoa Integrated School. Informants involved in this research include teachers and curriculum developers from Pahoa Integrated School.

As a result of this research, studied a reality that was built or constructed in applying persuasive technology as a learning communication medium at Pahoa Integrated School. Authors use descriptive case studies where case studies are used to explore new phenomena; explanatory to explain cause and effect; and descriptive to describe phenomena in their context. In addition, case studies are also an appropriate research method when the case under study needs to be explored more deeply to find answers (Robert K. Yin, 2018)

In conducting this research will use interviews as a data collection technique for participants. According to Yin, participants play an important role in explaining current information, especially in explaining evidence to strengthen an argument or problem being researched (Robert K. Yin, 2018). The informant profiles in this study are as follows:

1. Mathematic teacher at Pahoa Integrated School and as a homeroom teacher in class 8.5. Responsible for providing math instruction to junior high school students. The interview was conducted offline on Tuesday, May 21, 2024, from 16:30-17:10 WIB.
2. BP4 Data Analysis at Pahoa Integrated School. BP4 Data Analysis is responsible for analyzing student academic data, teacher performance, learning implementation plan, evaluation of school activities, etc. The interview was conducted offline on Tuesday, May 22, 2024, from 17.00-17.30 WIB.

The research analyzes the results of data collection using interview transcripts as a primary data source supported by observations made from photo and video documentation. This case study research applies analytical techniques that make an explanation that aims to analyze data from a case by studying it and compiling an explanation of the case. In case studies that apply this analysis technique, the aim is not only to draw conclusions but also to develop ideas that will be used in further research (Robert K. Yin, 2018).

RESULTS AND DISCUSSION

Nowadays, people live in the digital era. All work and learning processes are inseparable from the role of technology such as cell phones, computers, software, and the internet. A technology can be said to be successful if it can play an important role in facilitating human activities and has entered into the context of persuading each user of the technology itself. During the interview process, the authors obtained several points that became a reference to determine the conclusion of how effective the adoption of persuasive technology as a medium of learning communication at Pahoa Integrated School. Here are the details of these points: 1) Persuasive technology in the Pahoa Integrated School environment has become part of innovation in teaching and developing new programs because it is relevant to the needs of students, the curriculum, and the times that have led to digitalization. 2) Persuasive technology is very suitable for various types of teaching methods of educational activities. At Pahoa Integrated School, the adoption of technology in learning has been applied since students were in grade 4. Positively, every student has been introduced to get used to and adapt to existing digital developments. 3) Persuasive technology at Pahoa Integrated School has developed various digital platform technologies that have been integrated into the Learning Management System (LMS).

In the process of interviewing and observing the impact of adopting persuasive technology as a medium of learning communication in schools, the authors found that persuasive technology can influence student behavior and accentuate motivation in the teaching and learning process. Teachers and students alike become motivated to acquire new knowledge and skills. In addition, the use of persuasive technology has become a habit so teachers and students have begun to adjust and get used to the use of technology. As an example, learning Mathematics at Pahoa Integrated School has used technology adoption, namely from an application called Noosphere.

Noosphere is a technology-based platform designed to support personalized learning and education management. Noosphere application has been applied in Math learning since grade 4. In the Noosphere application, there is a round table feature that is usually used by students to discuss. In the discussion process, students convey their opinions or thinking processes to

each other so that children can learn to be confident. In addition, each student is also taught to guide their friends in a group who still do not understand the material (attitude) so that indirectly the communication skills of each student can be built.

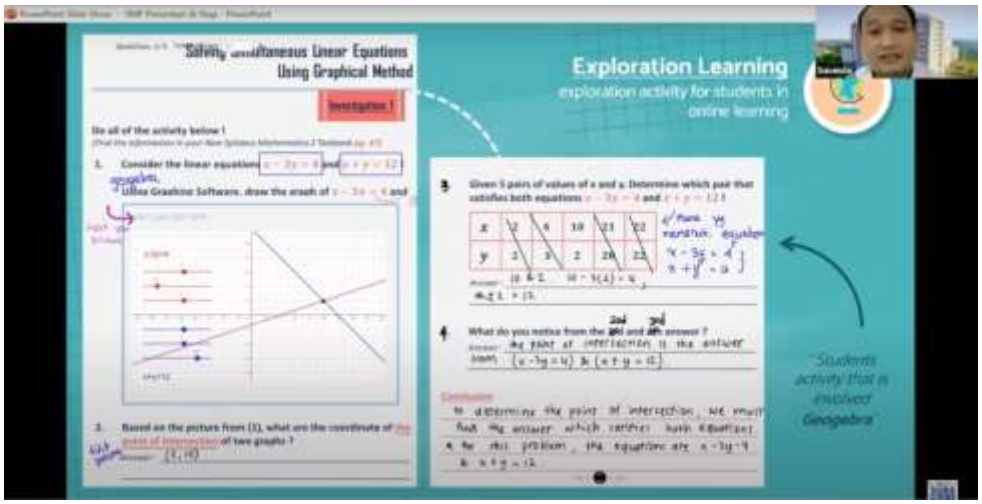

Figure 1. Recordings of the Mathematics learning process using the Noosphere application (TV Pahoa, 2022)

In the figure above, it can be seen that there is a change in the learning transformation of Mathematics teachers at Pahoa Integrated School. The change is from teacher-centered to student-centered. The main goal is to make students come first when learning takes place and no longer rely entirely on teachers to explain in front of the class without students getting the meaning of the learning delivered. The innovation of using Noosphere is considered successful because students are required to be active in arguing in solving math problems given by the teacher.

Noosphere applications can also collaborate with various applications on the market. In addition, with the adoption of persuasive technology in Mathematics learning, it is hoped that teachers and students can achieve the desired learning outcomes. Some of these learning objectives include learning transformation, exploration learning, discussion, and critical thinking day. Mathematics learning at Pahoa Integrated School is currently transformed by prioritizing Attitude, Communication, and Thinking (ACT) by using the round table discussion feature in Noosphere. With the adoption of this persuasive technology, it is hoped that Pahoa Integrated School students will have a good attitude and dare to express their opinions.

In the research process, the authors also combined the results from the interviews with the theory from McGriffin's Media Richness Theory. Media Richness Theory classifies each communication medium according to the complexity of the message efficiently and evaluates and understands the effectiveness of the medium in conveying information (Em Griffin et al., 2023). The adoption of Media Richness Theory (MRT) in the context of learning communication media in schools can provide valuable guidance for the development of effective learning strategies.

Selection of Appropriate Media

Learning media is one of the important components in the learning process for the absorption of material to students (Bella Lusiana & Rina Maryanti, 2020). In learning, the type of media chosen can be developed and utilized according to the conditions, time, cost, and desired learning objectives. Teachers and curriculum developers in schools can apply

Media Richness Theory to select the most suitable tools and media to convey information in learning. For example, complex learning topics that require a lot of interaction can be supported by using learning videos rather than printed materials.

Increased Student Interaction

A school environment is a place where students will socialize and interact with others based on certain standards and behaviors (Ananda Wini Rosarian & Kurnia Putri Sepdikasari Dirgantoro, 2020). The concept of student interaction in education includes student interaction with content, student interaction with teachers, and student interaction with students. These three are considered important elements for successful learning (Yongzhi Shan et al., 2023).In the learning environment, the interaction between teachers and students as well as between fellow students is very important to note. Schools should be able to facilitate the use of media technology that allows feedback between each other and can support the teaching and learning activities in the classroom.

Personalizing Learning

When learning takes place in a conventional classroom, whether we realize it or not, there is a direct personalization touch from the teacher such as learning interactions, activities to record learning materials delivered, making assignments, etc (Meidiani Elsandra Pratiwi et al., 2022). Media Richness Theory often called media richness theory has been widely applied to determine the effectiveness of the role of a medium in the realm of education (Rizki Saga Putra & Irwansyah, 2020). Schools can design educational approaches that are tailored to the teaching-learning process following the needs, abilities, interests, and learning styles of each student. At Pahoa Integrated School, teachers can use media that allows the delivery of messages tailored to the individual needs of students for example by utilizing Google Classroom and Smart Library to provide learning modules, e-books, etc.

In addition, to support Griffin's Media Richness Theory, the authors also combine the results of this study with the Technology Acceptance Model (TAM) theory developed by Fred Davis in 1989. The Technology Acceptance Model (TAM) explains user behavior in adopting and using information technology. The purpose of the Technology Acceptance Model (TAM) is to explain the determinants of acceptance of an information-based technology in general. In addition, the Technology Acceptance Model (TAM) can also explain end-user behavior to explore how people get new technological advances and what variables can influence selection, recognition, and intention in using innovations. The Technology Acceptance Model (TAM) theory also states that the intention to use a certain technology determines a person's willingness to use the technology or not (Tumsifu et al., 2020).

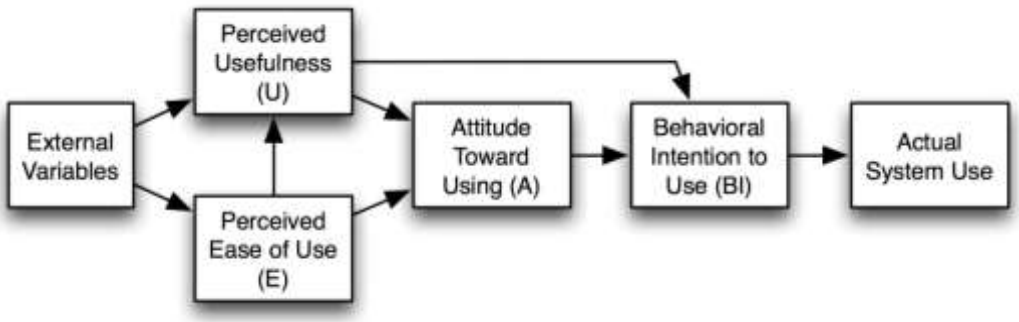

Figure 2. Technology Acceptance Model, TAM

From the model above, there is a correlation with the adoption of persuasive technology at Pahoa Integrated School. The following is the explanation:

1. External Variables
   This section refers to any factors outside the variables that can affect user behavior in adopting and using technology. For example, external variables can be influenced by social factors, individual characteristics (how individuals assess and adopt technology), organizational factors, government regulations, etc.
2. Perceived Usefulness (U)
   After understanding what factors are contained in external variables, the next external variables are broken down into 2 variables, namely Perceived Usefulness and Perceived Ease of Use. Perceived Usefulness refers to the extent to which users believe that using the technology will improve performance to achieve certain goals. At Pahoa Integrated School, Perceived Usefulness (U) can be seen as an indicator of improving the quality of student learning, and motivation, and how efficient the use of technology is to assist teachers in teaching more effectively.
3. Perceived Ease of Use (S)
   Refers to the extent to which users believe that when using the technology will make performance easier. The ease that users will get involves aspects such as accessibility, level of difficulty, and resources needed to master the technology. For persuasive technology to be adopted successfully, Pahoa Integrated School pays attention to several strategic steps such as regularly scheduling socialization and training, evaluating the use of the technology, and ensuring adequate technical support if the technology is faced with system constraints.
4. Attitude Toward Using
   Refers to an individual's attitude towards the use of the technology in question. This attitude can be evaluated in both positive and negative terms. From this evaluation, it will ultimately affect the individual's intention to use the technology. If the results are positive, individuals will have a strong intention to use it again, and if negative, the intention to use the technology will also decrease. This attitude is influenced by individual perceptions of the usefulness and ease of use of technology.
5. Behavioral Intention To Use
   At this stage, it has entered the stage of the level of desire or willingness of users to use technology to support their work. This includes individual beliefs about how often they intend to use the technology and how hard they will try to use it in their daily lives.
6. Actual System Use
   This concept shows the extent to which users use technology in real situations after they form an intention to use it. When users have a strong intention to use technology, they are more likely to use the technology in their daily activities. Actual system use is the result that is the goal of the technology adoption process. This part is an indicator of the extent to which the technology has been accepted and used by users in a particular environment. If the actual system use is high, it indicates a successful adoption of the technology, otherwise if it is low, it shows that there are obstacles or challenges in accepting the technology.

CONCLUSION

In everyday life, communication is always an inseparable part of social interaction. Social interaction can be in the form of economic interaction, political interaction, or educational interaction. Communication in education itself occurs because of the interaction between teachers and students. When learning takes place, there is an exchange and delivery of learning material between teachers and students which makes the learning process run effectively (Gan Gan Giantik, 2020).

The results of this study lead to the conclusion that the adoption of persuasive technology that has been applied by Pahoa Integrated School has been running effectively. The learning process can be said to be effective if the teacher has successfully applied learning to students with the use of certain methods to achieve certain instructional goals (Henilia Yulita, n.d.). In practice, persuasive technology has been able to accommodate the communicator-medium-communicant. The process of teaching activities carried out by teachers is included as a communicator. In addition, various persuasive technology platforms that support learning such as Noosphere, Smart Library, Zoom, etc. are included in the medium, and students as part of communicators who receive the results and impacts of teachers and the use of persuasive technology.

In its application, a communication process involving several parties will certainly cause cognitive and impulsive responses (Fakhriy Dinansyah et al., 2024).In the application of persuasive technology adoption at Pahoa Integrated School, the school, teachers and students have been in a cognitive response. The cognitive response to the application of persuasive technology in schools involves a deep thought process, analysis, and evaluation before accepting or using the technology. Several points such as evaluating the benefits and risks as well as the planning and implementation process have been carefully considered when adopting persuasive technology in the learning environment at school.

The school in collaboration with curriculum developers has formulated systems and policies so that learning at school begins to enter into the use of digital applications. In addition, Pahoa Integrated School has also prepared facilities and infrastructure well to support the adoption of persuasive technology in teaching and learning activities so that it can run more optimally. In its implementation, teachers are also always provided with training, discussion, and evaluation related to the teaching and learning outcomes achieved. So far, students have been able to adapt to technological developments in learning, bringing students to innovations in classroom learning. Learning innovations in the classroom are needed so that students do not feel bored and remain motivated in the learning process. The innovations developed can include various things such as the use of technology, creative teaching methods, and student-centered teaching so that Pahoa Integrated School will still be able to maintain the quality of education. For future authors, it is suggested that they can apply and develop the adoption of persuasive technology in the learning environment at school so that the teaching and learning process can still keep up with developments in the current digital era.

Future research is expected to encourage the development of technological skills in the learning process at school and encourage students to be able to get used to accessing digital learning resources such as learning videos, e-books, online tutorials, etc that have been provided by schools.

REFERENCES

Ananda Wini Rosarian, & Kurnia Putri Sepdikasari Dirgantoro. (2020). *UPAYA GURU DALAM MEMBANGUN INTERAKSI SISWA MELALUI METODE BELAJAR SAMBIL BERMAIN [TEACHER'S EFFORTS IN BUILDING STUDENT INTERACTION USING A GAME BASED LEARNING METHOD]* . *3*, 146–163.

Bakhshian, S., & Lee, Y. A. (2021). ocial acceptability and product attributes of smart apparel: Their effects on consumers' attitude and use intention. *Journal of the Textile Institute*.

Bella Lusiana, & Rina Maryanti. (2020). The Effectiveness of Learning Media Used During Online Learning. *Media Pendidikan, Gizi, Dan Kuliner*, *9*(2), 81–92.

Brian J Fogg. (2022). *Behavioral Design*.

De Leon, M. V, Atienza, R. P., & Daniel Susilo. (2020). Influence of self-service technology (SST) service quality dimensions as a second-order factor on perceived value and customer satisfaction in a mobile banking application. *Cogent Business & Management*.

Em Griffin, Andrew Ledbetter, & Glenn Sparks. (2023). *A First Look at Communication Theory* (11th ed.).

Fakhriy Dinansyah, Daniel Susilo, & Berto, A. R. (2024). Live streaming commerce as communication media at Social Bread. *Bricolage: Jurnal Magister Ilmu Komunikasi*.

Fogg, B. J. (2022). *Persuasive Technology: Using Computers to Change What We Think and Do*.

Fransiskus Adikara. (2020). PENYULUHAN MENGENAI TANTANGAN REVOLUSI INDUSTRI4.0 DI BIDANG PENDIDIKAN. *Jurnal Abdimas*, *6*.

Gan Gan Giantik. (2020). Strategi Komunikasi Guru Dalam Upaya Meningkatkan Proses Pembelajaran Siswa SDN Tebet Barat 01 Jakarta Selatan Di Masa Pandemi Covid - 19. *Journal Komunikasi*.

Gunawan, & Asnil Aidah Ritonga. (2019). *Media Pembelajaran Berbasis Industri 4.0*.

Henilia Yulita. (n.d.). FAKTOR-FAKTOR YANG MEMPENGARUHI EFEKTIFITAS DAN MOTIVASI MAHASISWA DALAM MENGGUNAKAN METODE PEMBELAJARAN E-LEARNING. *Business & Management Journal Bunda Mulia*, *10*.

Hepp, A. (2020). *DEEP MEDIATIZATION*.

Mansyur, A. R. (n.d.). Komunikasi Pendidikan Guru Madrasah Ibtidaiyah dalam Jaringan (DARING). *Education and Learning Journal*.

Meidiani Elsandra Pratiwi, Dewi Salma Prawiladilaga, & Kunto Imbar Nursetyo. (2022). Pemanfaatan Prinsip Personalisasi Belajar dalam Pembelajaran Daring pada Mata Kuliah Designing ELearning. *Jurnal Pembelajaran Inovatif*, *05*, 56–62.

Michael Christian, Eko Retno Indriyarti, & Suryo Wibowo. (n.d.). Investigating Technostress as Moderating Information Quality and E-Learning Effectiveness on Students in Jakarta During the Covid19 Pandemic. *Ilkogretim Online - Elementary Education Online*, *20*(4), 46–52.

Mohammed Abdullah Bawazir, Murni Mahmud, & Nurul Nuha Abdul Molok. (2019). Persuasive Technology in The Islamic Perspective: The Principles and Strategies. *International Journal on Perceptive and Cognitive Computing (IJPCC)*.

Noora Aldenaini, Felwah Alqahtani, Rita Orji, & Srinivas Sampalli. (2020). Trends in Persuasive Technologies for Physical Activity and Sedentary Behavior: A Systematic Review. *Frontiers in Artificial Intelligence*.

Rahmatika, Munawir Yusuf, & Leo Agung. (2021). The Effectiveness of Youtube as an Online Learning Media. *Journal of Education Technology*, *5(1)*, 152–158.

Rizki Saga Putra, & Irwansyah. (2020). MEDIA KOMUNIKASI DIGITAL, EFEKTIF NAMUN TIDAK EFISIEN,STUDI MEDIA RICHNESS THEORY DALAM PEMBELAJARAN JARAK JAUH BERBASIS TEKNOLOGI DI MASA PANDEMI. *Global Komunika*, *1*.

Robert K. Yin. (2018). *Case Study Research and Applications Design and Methods*. SAGE Publications.

Ruijie Wang, Reece Bush-Evans, Emily Arden-Close, Elvira Bolat, John McAlaney, Sarah Hodge, Sarah Thomas, & Keith Phalp. (2022). Transparency in persuasive

technology, immersive technology, and online marketing: Facilitating users' informed decision making and practical implications . *Elsevier Ltd*.

Rustamov Ilkhom Tursunovich. (2022). GUIDELINES FOR DESIGNING EFFECTIVE LANGUAGE TEACHING MATERIALS. *American Journal of Research in Humanities and Social Sciences*, *7*.

Sueca, I. N. (2019). Peran Komunikasi Pendidikan Sebagai Kesatuan Dalam Pembelajaran. *Jurnal Ilmiah Komunikasi Hindu*, 178–192.

Surani, D. (2019). *StudiLiteratur:PeranTeknologiPendidikandalamPendidikan4.0.prosidingSeminarNasionalPendidikanFKIP*. 456–469.

Tumsifu, E., Jani, D., & Gekombe, C. (2020). *Small and Medium Enterprises and Social Media Usage: A Fashion Industry Perspective*.

TV Pahoa. (2022). *Perluasan Penggunaan Aplikasi Noosphere pada Mata Pelajaran Sains*.

Wangge. (2020). *Implementasi Media Pembelajaran Berbasis ICT Dalam Proses Pembelajaran Matematika Di Sekolah Menengah*. *1*.

Wayan G. Santika, I Ketut Gede Sudiartha, Adi Winarta, & I Gusti Putu Mustawan Eka Putra. (n.d.). Pembuatan Interface Remote Controller AC Terintegrasi Komputer dan Animasi dengan Aplikasi Teknologi Persuasif untuk Mendorong Perilaku Hemat Energi . *Politeknik Negeri Bali*.

Yenni Yamin. (2022). Pengembangan Media Pembelajaran Literasi Digital Dalam Meningkatkan Minat Baca Siswa Kelas IV SDN. 1 Rimo. *PROSIDING SEMINAR NASIONAL PENDIDIKAN DASAR*, *1*.

Yongzhi Shan, Hongxing Wang, Yanfeng Yang, & Jiahao Wang6. (2023). Evidence of a large current of transcranial alternating current stimulation directly to deep brain regions. *Molecular Psychiatry*.